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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,129	10/28/2003	Mina Farr	15436.56.1	6128

22913 7590 07/22/2005

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EXAMINER

STAHL, MICHAEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,129

Applicant(s)

FARR ET AL.

Examiner

Mike Stahl

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/27/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Declaration

The declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It was not executed in accordance with either 37 CFR 1.66 or 1.68.

The application image file under the oath/declaration heading shows pages 1 and 2 of a declaration, with page 2 containing the signature of inventor Farr, but then skips to a second page 2 and a page 4 which appear to be part of an assignment document. Page 4 contains the signature of inventor Lipson but does not appear to be part of the declaration. Applicant can view the file images via the Public PAIR system (<http://portal.uspto.gov/external/portal/pair>) by entering this application number, clicking on the "Image File Wrapper" tab, and clicking on the "Oath or Declaration Filed" link. Based on the application images available to the examiner, it appears that the declaration itself was not signed by inventor Lipson.

Specification

The specification is objected to for the following informalities:

In [0034], [0035], and [0037], the figure numbers should be changed to match the drawing changes submitted March 16 2004, i.e. "5" should be changed to "6", "6A" should be changed to "5A", and "6B" should be changed to "5B".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Jewell et al. (US 6243508).

Claim 6: Jewell discloses a port comprising: a port body 52' including a source guide 78 and a fiber guide 80, wherein the source guide is formed to connect with the source optical element 26 and wherein the fiber guide is formed to connect with the receiving optical element 32; and a lens formed as an integral part of the body, the lens comprising a focusing lens surface 25' and a flat lens surface (fig. 13). The lens may be designed to aberrate the light so that an image on the receiving device is defocused, in order to reduce feedback (col. 8 lns. 45-52).

Claim 7: The focusing lens surface has a clear aperture.

Claim 8: The lens has a length to magnify the light being coupled.

Claim 9: The focusing lens surface couples high angle rays from the source optical element onto the receiving optical element, wherein an image formed by the lens on the receiving optical element is aberrated.

Claim 10: A point light source from the source optical element 26 is imaged as a spot on the receiving optical element 32.

Claim 11: The port includes a fiber stop formed within the fiber guide (a shoulder portion slightly smaller in diameter than the fiber, by the left end of the fiber in fig. 13), wherein

Art Unit: 2874

the fiber stop positions the receiving optical element near the flat lens surface. "Near" is not being interpreted as "adjacent" or as "closer than the focusing lens surface".

Claims 12-13: The port body 52' may be molded (col. 13 lns. 58-59). The lens described above in relation to claims 6-11 meets the limitations of claims 12-13.

Claim 14: The lens includes a clear aperture defined by a sag table. It is noted that the sag table may be compiled by measuring the lens, or the lens may be manufactured according to a pre-calculated sag table.

Claim 15: The tolerance of the sag table is less than 0.1 microns. The tolerance is arbitrarily determined by the compiler of the table. A sag table is merely a list of numbers. Reciting that the numbers in a sag table have a specific tolerance is not considered equivalent to reciting that the produced lens surface has that tolerance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2874

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jewell et al. (cited above).

Jewell does not state the size of the spot on the receiving optical element. Since the receiving optical element may be an optical fiber, and optical fibers usually have a core diameter on the order of 10 microns, it would have been obvious to a skilled person to have configured the spot to be of the same size. This size would enable the largest reduction in reflection noise without actually wasting light by having it incident on the cladding.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (US 6302596) in view of Zarem et al. (US 5515469).

Claim 1: Cohen discloses an optical transceiver comprising: a body 104 including a source guide 138 that connects the optical transceiver with the source optical element 134 and a fiber guide 114 that connects the optical transceiver with the receiving optical element (such as the ferrule 21 and fiber 20 of fig. 1); and a lens 108 formed as a molded part of the body, the lens including a focusing lens surface positioned within the source guide such that far field radiation emitted by the source optical element is directed to the receiving optical element; and a flat lens surface positioned within the fiber guide, wherein the flat lens surface does not have optical power. See fig. 2 and col. 6 lns. 7-58.

Art Unit: 2874

Cohen does not specifically mention aberrating the light to reduce feedback. Zarem teaches an optical coupling between a laser and a fiber in which the lens is intentionally configured so that the light incident on the fiber is defocused. The defocusing reduces reflections which can destabilize the laser (col. 4 lns. 20-65). Since the source optical element **134** in Cohen is also a laser (col. 6 lns. 54-55), it would clearly be beneficial to protect it from reflections as well. Thus it would have been obvious to a skilled person to have configured the lens of Cohen to defocus the light incident on the receiving optical element in the manner suggested by Zarem.

Claim 2: The body includes a fiber stop **112** located within the fiber guide, wherein the fiber stop positions the receiving optical element with respect to the flat lens surface.

Claim 3: The lens includes a length which determines a magnification of the lens.

Claim 4: The focusing lens surface includes a clear aperture.

Claim 5: The focusing lens surface couples high angle rays from the source optical element on the receiving optical element, wherein an image formed by the lens on the receiving optical element is aberrated.

Claims 6-15: The limitations of these claims are met by the modified Cohen device described above in relation to claims 1-5.

Claim 16: Cohen does not state the size of the spot on the receiving optical element. Since the receiving optical element includes an optical fiber, and optical fibers usually have a core diameter on the order of 10 microns, it would have been obvious to a skilled person to have configured the spot to be of the same size. This size would enable the largest reduction in reflection noise without actually wasting light by having it incident on the cladding.

Art Unit: 2874

Conclusion


The additional references listed on the attached PTO-892 form are considered relevant to this application.

Inquiries about this letter should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at 571-272-1626. Official communications which are eligible for submission by facsimile and which pertain to this application may be faxed to 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJS

Mike Stahl
Patent Examiner
Art Unit 2874

July 15, 2005


Sung Pak
Patent Examiner
AU 2874